

Response After Final
Application No. 10/781,699
Attorney Docket No. 042115

REMARKS

Claims 1 - 3 are pending in the present application. By this Amendment, claim 1 has been amended and claim 2 has been cancelled. No new matter has been added. It is respectfully submitted that this Amendment is fully responsive to the Office Action dated January 13, 2006.

As to the Merits:

As to the merits of this case, the Examiner relies on the newly cited reference of Weil (USP 3,893,015) in setting forth the following new rejection:

claims 1-3 stand rejected under 35 USC 103(a) as being unpatentable over Zhu et al. (U.S. Publication No. 2003/0198064, of record) in view of Akerson (U.S. Patent No. 6,344,985, of record) and Weil.

This rejection is respectfully traversed.

Claim 1, as amended, now calls for *an LC resonant circuit is provided between the winding wire for the high-voltage side and the switching section for the higher voltage side, which causes the current flowing on the winding wire of the low and high voltage sides to have sinusoidal waveforms.*

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For example, as discussed in page 4, line 26 to page 5, line 4 of the present specification, less losses in a LC resonant circuit can be caused by providing the circuit on the higher voltage side, on which a smaller current flows, in comparison with those of a LC resonant circuit which is provided on the lower voltage side.

With regard to Applicants' argument that the Akerson reference fails to disclose that the current waveforms on the windings (i.e., the current waveform diagrams of Figs. 5 and 6) have a sinusoidal wave form and therefore Zhu et al. and Akerson, fail to disclose or fairly suggest the features of claim 1, it is respectfully submitted that the Examiner acknowledges that Akerson fails to disclose this feature by relying on the newly applied secondary reference of Weil for teaching this feature of claim 1.

More specifically, the Examiner asserts in page 3 of the Action that:

Weil (3,893,015) discloses that the use of an LC resonant circuit for generating currents with sinusoidal waveforms across both windings is well known in the art. Its LC circuits comprising inductors 16 and 18 and capacitors 24 and 25 provide sinusoidal waveform across capacitor 25 is fed to the primary winding of the transformer 31 and inherently to the secondary winding while providing stable operation from zero to full load. See column 6, lines 35-68.

However, it is respectfully submitted that the Examiner has failed to provide adequate motivation for combining the teachings of Weil with that of Akerson and Zhu.

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That is, the Examiner asserts on page 3 of the Action that:

Thus, it would have been obvious to one having ordinary skill in the art to employ an LC resonant circuit of Akerson and Weir in the converter of Zhu et al to obtain the claimed invention, for the purpose of decreasing transformer leakage inductance and to decrease switching losses while providing stable operation.

However, it is submitted that the Examiner's assertion of employing an LC resonant circuit of Akerson and Weil in the converter of Zhu would not have a reasonable expectation of success, since the LC resonant circuits of Akerson and Weil are completely different from one another. In other words, one of ordinary skill in the art would not be able to employ both the LC resonant circuit of Akerson and the LC resonant circuit of Weil in the converter of Zhu. Moreover, the Examiner has failed to provide adequate motivation as to why one of ordinary skill in the art would be motivated to include both the LC resonant circuit of Akerson and the LC resonant circuit of Weil in the converter of Zhu.

As such, it is respectfully submitted that the Examiner has failed to establish a *prima facie* case of obviousness with regard to the features of claim 1.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

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If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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